Appl. No. : 10/528,125

Filed: November 21, 2005

AMENDMENTS TO THE CLAIMS

 (Currently amended) A method for electrolytic coating of a material with an aluminum, magnesium or alloys of aluminum and magnesium, said method comprising

immersing an aluminum/magnesium alloy or zinc/magnesium alloy material in a halogen-free electrolytic bath comprising an electrolyte for pretreatment, wherein said material is electrically connected as an anode therein, and anodically charging the material and

reversing polarity of the material, thereby

performing the electrolytic coating in the same electrolyte immediately thereafter, the electrolytic bath further comprising organoaluminum compounds of general formulas (I) and (II)

$$M[(R^1)_3Al-(H-Al(R^2)_2)_n-R^3]$$
 (I)

$$Al(R^4)_3$$
 (II)

as the electrolyte, wherein n is equal to 0 or 1, M is sodium or potassium, and R^1 , R^2 , R^3 , R^4 are the same or different, R^1 , R^2 , R^3 , R^4 being a C_1 - C_4 alkyl group, and a halogen-free, aprotic solvent being used as solvent for the electrolyte.

- (Previously presented) The method according to claim 1, wherein a mixture of the complexes K[AlEt₄], Na[AlEt₄] and AlEt₃ is employed as the electrolyte.
- (Previously presented) The method according to claim 2, wherein a molar ratio of said complexes K[AlEt₄], Na[AlEt₄] to AlEt₃ is from 1:0.5 to 1:3.
- (Previously presented) The method according to claim 2, wherein 0 to 25 mole-% Na[AlEt₄] is employed, relative to the mixture of the complexes K[AlEt₄] and Na[AlEt₄].
- (Previously presented) The method according to Claim 2, wherein a mixture of 0.8 mol K[AlEt₄], 0.2 mol Na[AlEt₄], 2.0 mol AlEt₃ in 3.3 mol toluene is used as the electrolyte bath.
- (Previously presented) The method according to claim 1, wherein a mixture of Na[Et₃Al-H-AlEt₃] and Na[AlEt₄] and AlEt₄ is used as the electrolyte.
- (Previously presented) The method according to claim 6, wherein a molar ratio
 of Na[Et₃Al-H-AlEt₃] to Na[AlEt₄] is from 4:1 to 1:1.

Appl. No. : 10/528,125 Filed : November 21, 2005

 (Previously presented) The method according to claim 7, wherein a molar ratio of Na[AlEt₄] to AlEt₅ is 1:2.

- 9. (Previously presented) The method according to Claim 8, wherein a mixture of 1 mol Na[Et₃Al-H-AlEt₃], 0.5 mol Na[AlEt₄] and 1 mol AlEt₃ in 3 mol toluene is used as the electrolyte bath.
- (Previously presented) The method according to Claim 1 wherein the electrolytic coating is performed at temperatures of from 80 to 105°C.
- (Previously presented) The method according to Claim 1 wherein the pretreatment is performed for a period of from 1 to 20 minutes.
- 12. (Previously presented) The method according to Claim 1, wherein the pretreatment is performed at an anodic load of the material with a current density of from 0.2 to 2 $A/dm^2\tau$
- (Previously presented) The method of Claim 3, wherein the molar ratio of said complexes K[AlEt₄], Na[AlEt₄] to AlEt₅ is 1:2.
- 14. (Previously presented) The method according to claim 4 wherein 5 to 20 mole-% Na[AlEt₄] is employed, relative to the mixture of the complexes K[AlEt₄] and Na[AlEt₄].
- 15. (Previously presented) The method of Claim 7, wherein the molar ratio of Na[Et₃Al-H-AlEt₃] to Na[AlEt₄] is 2:1.
- (Previously presented) The method of Claim 10, wherein the electrolytic coating is performed at temperatures of from 91 to 100°C.
- 17. (Previously presented) The method of Claim 11, wherein the pretreatment is performed for a period of from 5 to 15 minutes.
- 18. (Previously presented) The method of Claim 12, wherein the pretreatment is performed at an anodic load of the material with a current density of from 0.5 to 1.5 A/dm².